

## Optional Information

Name of school:

Date of inspection:

Career-Technical program/course/room:

Signature of inspector:



## Asbestos During Brake and Clutch Service Work Self-Inspection Checklist

**Guidelines:** This checklist covers Occupational Safety and Health Administration (OSHA) asbestos regulations (29 CFR 1910.1001). It applies to school district employees and students who have potential exposure to asbestos fibers from **asbestos-containing materials**. This checklist focuses on the most common exposure situation in schools--brake and clutch service work on motor vehicles. Since asbestos can also be found in materials such as floor tiles, textured paint, soundproofing compound, insulation, joint compound, spackle, oven-door gaskets, lab bench tops, cement board (Transite), shingles, siding and heat-resistant gloves, the teacher should be constantly on guard against handling any **asbestos-containing materials**. The regulations cited apply only to private employers and their employees, unless adopted by a State agency and applied to other groups such as public employees. Definitions of terms in bold type are provided at the end of the checklist. This checklist does not cover asbestos abatement work, asbestos exposures other than encountered during brake and clutch service work, or the Asbestos Hazard Emergency Response Act (AHERA) regulations.

Please Circle

### Engineering Controls and Work Practices

1. Are one of the following methods used during automotive

Y N N/A ??

brake and clutch inspection, disassembly, repair, and assembly operations? [29 CFR 1910.1001(f)(3)]  
(see definitions for descriptions of methods)

- a. **Negative-pressure enclosure/HEPA**

**vacuum system method** [recommended method]

- b. **Low-pressure/wet-cleaning method**

[recommended method]

- c. An **equivalent method** clearly documented to be as

good as or better than the **negative-pressure enclosure/HEPA vacuum system method** for controlling asbestos exposure.

**Note:** OSHA has accepted the **solvent spray method** as an **equivalent method** that may be used when proper work practices are followed.

- d. **Wet method**, if no more than 5 pairs of brakes or

5 clutches are inspected, disassembled, reassembled, or repaired per week.

2. Are hand-operated and power-operated tools that produce or release asbestos fibers, such as saws, abrasive wheels, and drills provided with local exhaust ventilation systems? [29 CFR 1910.1001(f)(1)(iv)and(v)]

Y N N/A ??

3. Is compressed air prohibited for cleaning asbestos dust unless it is used in conjunction with a ventilation system that effectively captures the dust cloud created by the compressed air? [29 CFR 1910.1001(f)(1)(ix)]

Y N N/A ??

### Protective Equipment

4. If the possibility of eye irritation exists, are face shields, vented goggles, or other appropriate protective equipment provided? [29 CFR 1910.1001(h)(1)(iii)]

Y N N/A ??

5. Is the protective equipment cleaned, laundered, or repaired as necessary to maintain its effectiveness? [1901.1001(h)(3)(i)]

Y N N/A ??

6. Is clean protective equipment provided at least weekly to each affected person? [1901.1001(h)(3)(i)]

Y N N/A ??

### Warning Labels

7. Are warning labels affixed to all raw materials, mixtures, scrap, waste, debris, and other products containing asbestos fibers, or to their containers? [29 CFR 1910.1001(j)(4)(i)]

Y N N/A ??

**Note:** Warning labels are not required if the manufacturer of an asbestos-containing product can demonstrate that no airborne concentrations of asbestos fibers will exceed the allowable limits during any reasonably foreseeable use, handling, storage, disposal, processing, or transportation.

8. Do warning labels include the following information? [29 CFR 1910.1001(j)(4)(ii)]

Y N N/A ??

**DANGER  
CONTAINS ASBESTOS FIBERS  
AVOID CREATING DUST  
CANCER AND LUNG DISEASE HAZARD>**

### Information and Training

9. Is training as required by the OSHA standard provided to employees who are exposed to airborne concentrations of asbestos at or above the **permissible exposure limit** and/or **excursion limit**? [29 CFR 1910.1001(j)(7)]

Y N N/A ??

**Note:** The training must be provided at the time of initial assignment and at least annually thereafter. The training must include information about the following:

- a. health effects of asbestos
- b. the relationship between smoking, asbestos, and increased risk of lung cancer
- c. how quantity, location, manner of use, release, and storage of asbestos could result in exposure to asbestos
- d. the engineering controls and work practices for reducing asbestos exposure
- e. the proper procedures to be followed to reduce the risk of exposure
- f. a description of the medical surveillance program
- g. the OSHA standard(h) asbestos labeling and posting requirements
- h. where to get additional information
- i. the proper use of respirators and protective clothing

10. Is asbestos awareness training provided at least once per year to people who do housekeeping operations in area(s) that have asbestos-containing material? [29 CFR 1910.1001(j)(7)(iv)]

Y N N/A ??

11. Does asbestos awareness training for people who do housekeeping operations in the areas(s) that have asbestos-containing material include the following elements? [29 CFR 1910.1001(j)(7)(iv)]

Y N N/A ??

1. health effects of asbestos
2. locations of asbestos-containing material in the facility
3. recognition of asbestos-containing material damage and deterioration
4. requirements of the OSHA asbestos standard regarding housekeeping
5. proper response to fiber release episodes

12. Are the OSHA asbestos standard (29 CFR 1910.1001) and its appendixes made available to all affected employers? [29 CFR 1910.1001(j)(7)(v)(A)] **Y N N/A ??**
13. Are all employees informed self-help smoking cessation program materials are available on request? [29 CFR 1910.1001(j)(7)(v)(C)] **Y N N/A ??**
- Note:** Materials such as NIH Publication No. 89-1647, or equivalent self-help materials must be provided on request.

### Housekeeping

14. Are all surfaces maintained as free as practicable of asbestos-containing material waste and debris and accompanying dust? [29 CFR 1910.1001(k)(1)] **Y N N/A ??**
15. Are all spills and sudden releases of asbestos-containing material asbestos cleaned up as soon as possible? [29 CFR 1910.1001(k)(2)] **Y N N/A ??**
16. Is HEPA-filtered vacuuming equipment used for vacuuming asbestos-containing waste and debris? [29 CFR 1910.1001(k)(4)] **Y N N/A ??**
- Note:** The equipment shall be used and emptied in a manner that minimizes the reentry of asbestos into the workplace. [29 CFR 1910.1001(k)(4)]
17. Is shoveling, dry sweeping, and dry cleanup of asbestos only permitted where vacuuming or wet cleaning are not feasible? [29 CFR 1910.1001(k)(5)] **Y N N/A ??**
18. Are waste, scrap, debris, bags, containers, equipment, and clothing contaminated with asbestos that is consigned for disposal, collected in sealed impermeable bags, or other closed, impermeable containers? [29 CFR 1910.1001(k)(6)] **Y N N/A ??**

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### Definitions:

**Asbestos-containing materials:** any material that contains more than 1% asbestos.

**Equivalent method:** one that has sufficient written detail so that it can be reproduced. Exposures resulting from the equivalent method must be equal to or less than the exposures that would result from the use of the **negative-pressure enclosure/HEPA vacuum system method**. For purposes of making this comparison, the employer shall assume that exposures resulting from the use of the **negative-pressure enclosure/HEPA vacuum system method** shall not exceed 0.016 f/cc, as measured by the OSHA reference method and as averaged over at least 18 personal samples. The solvent spray method is an **equivalent method** that may be used when proper work practices are followed.

**HEPA:** a high-efficiency particulate air filter that is 99.97 percent efficient for 0.3 microns.

For **low-pressure/wet-cleaning methods**,

1. A catch basin shall be placed under the brake assembly, positioned to avoid splashes and spills.
2. The reservoir shall contain water with an organic solvent or wetting agent. The flow of liquid shall be controlled such that the brake assembly is gently flooded to prevent the asbestos-containing brake dust from becoming airborne.
3. The aqueous solution shall be allowed to flow between the brake drum and brake support before the drum is removed.
4. After removing the brake drum, the wheel hub and back of the brake assembly shall be thoroughly wetted to suppress dust.
5. The brake support plate, brake shoes, and brake components used to attach the brake shoes shall be thoroughly washed before removing the old shoes.
6. In systems using filters, the filters, when full, shall be first wetted with a fine mist of water, then removed and placed immediately in an impermeable container, labeled as asbestos waste, and disposed of according to regulations.
7. Any spills of asbestos-containing aqueous solution or any asbestos-containing waste material shall be cleaned up immediately and disposed of according to regulations.
8. The use of dry brushing during low pressure/wet cleaning operations is prohibited.

For the **negative-pressure enclosure/HEPA vacuum system method**,

1. The brake and clutch inspection, disassembly, repair, and assembly operations shall be enclosed to cover and contain the clutch or brake assembly and to prevent the release of asbestos fibers into the worker's breathing zone.
2. The enclosure shall be sealed tightly and thoroughly inspected for leaks before on brake and clutch inspection, disassembly, repair, and assembly.
3. The enclosure shall be such that the worker can clearly see the operation and shall provide impermeable sleeves through which the worker can handle the brake and clutch inspection, disassembly, repair, and assembly. The integrity of the sleeves and ports shall be examined before work begins.
4. A HEPA-filtered vacuum shall be employed to maintain the enclosure under negative pressure throughout the operation. Compressed air may be used to remove asbestos fibers or particles from the enclosure.
5. The HEPA vacuum shall be used first to loosen the asbestos containing residue from the brake and clutch parts and then to evacuate the loosened asbestos containing material from the enclosure and capture the material in the vacuum filter.
6. The vacuum's filter, when full, shall be first wetted with a fine mist of water, then removed and placed immediately in an impermeable container, labeled as asbestos waste and disposed of according to regulations.
7. Any spills or releases of asbestos containing waste material from inside of the enclosure or

vacuum hose or vacuum filter shall be immediately cleaned up and disposed of according to regulations.

For the **solvent spray method** (from OSHA Directive Number CPL 2-2.63 (REVISED), Inspection Procedures for Occupational Exposure to Asbestos Final Rule 29 CFR Parts 1910.1001, 1926.1101, and 1915.1001, November 3, 1995).

1. The solvent shall be used to first wet the brake and clutch parts.
2. The brake and clutch parts shall be wiped clean with a cloth.
3. The contaminated cloth shall be placed in an impermeable container, and then either disposed of properly or laundered in a way that prevents the release of asbestos fibers.
4. Any spilled solvent or dispersed asbestos shall be cleaned up immediately and not allowed to dry, either with a cloth or a HEPA vacuum.c
5. Dry brushing during solvent spray operations is prohibited.

For the **wet method**,

1. A spray bottle, hose nozzle, or other implement capable of delivering a fine mist of water or amended water or other delivery system capable of delivering water at low pressure, shall be used to first thoroughly wet the brake and clutch parts. Brake and clutch components shall then be wiped clean with a cloth.
2. The cloth shall be placed in an impermeable container, labeled as asbestos waste and then disposed of according to regulations, or the cloth shall be laundered in a way to prevent the release of asbestos fibers.
3. Any spills of solvent or any asbestos containing waste material shall be cleaned up immediately according to regulations.
4. The use of dry brushing during the wet method operations is prohibited.

**Excursion limit:** an airborne concentration of a substance of interest that allows a worker to be exposed to a concentration that exceeds the OSHA permissible exposure limit as averaged over a sampling period of 15-30 minutes (specified by each substance) but overall not exceeding the 8-hr TWA. Excursion limits are given when no short-term exposure limits are established. **Note:** The American Conference of Governmental Industrial Hygienists allows their excursion limits to be 3-5 times their 8-hr exposure limits (TLVs) for a total of 30 minutes a day but not exceeding the 8-hr TWA.

**Permissible exposure limit:** an employee's exposure limit to an airborne concentration of a substance that OSHA publishes and enforces. It is expressed as an 8-hr time-weighted average (TWA). Permissible exposure limits are protective limits that should not be exceeded.

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**Comments/Corrective action:**

**NIOSH Safety Checklist Program for Schools**  
(and Other Safety Databases)

**National Institute for Occupational Safety and Health**